

In The Claims:

1. (Currently Amended) A method of controlling an automotive vehicle having a turning radius comprising:

determining a steering wheel angle;

determining a steering wheel direction;

determining a steering wheel angular rate and

applying brake-steer as a function of steering wheel angle, steering wheel angular rate and steering wheel direction, wherein the steering wheel direction comprises an increasing direction and a decreasing direction, wherein applying brake-steer comprises applying brake-steer using a first boost curve in a first direction and applying brake-steer using a second boost curve in a second direction, and wherein the first boost curve is different than the second boost curve.

2. (Original) A method as recited in claim 1 further comprising determining a vehicle speed and wherein applying brake-steer comprises applying brake-steer as a function of steering wheel angle, steering wheel rate, steering wheel direction and said vehicle speed.

3. (Cancelled)

4. (Currently Amended) A method as recited in claim [[3]] 1 wherein the first boost curve comprises a non-linear-boost curve.

5. (Currently Amended) A method as recited in claim [[3]] 1 wherein the first boost curve increases brake-steer at a first rate for a first period of time, increases brake-steer at a second rate for a second period of time, wherein the second rate is greater than the first rate, and increases brake-steer at third rate for a third period of time, wherein the third rate is less than the second rate.

6. (Currently Amended) A method as recited in claim [[3]] 1 wherein the second boost curve comprises a non-linear-boost curve.

7. (Currently Amended) A method as recited in claim [[3]] 1 wherein the second boost curve decreases brake-steer at a first rate for a first period of time and decreases brake-steer at a second rate for a second period of time, wherein the second rate is less than the first rate.

8. (Original) A method as recited in claim 1 wherein applying brake-steer reduces the turning radius of the vehicle.

9. (Original) A method as recited in claim 8 wherein applying brake-steer comprises applying at least one brake at a first wheel to reduce the vehicle turning radius.

10. (Original) A method as recited in claim 9 wherein applying brake-steer comprises applying an increased drive torque to a second wheel.

11. (Original) A method as recited in claim 1 further comprising detecting a parking mode, and applying brake-steer as a function of the parking mode, steering wheel angle, steering wheel angular rate and steering wheel direction.

12. (Original) A method of controlling an automotive vehicle comprising:
detecting a parking mode;
in the parking mode, when the steering wheel angle is increasing applying brake-steer using a first boost curve; and
when the steering wheel angle is decreasing applying brake-steer using a second boost curve different than the first boost curve.

13. (Original) A method as recited in claim 12 wherein applying brake-steer comprise a function of a steering wheel angle, a steering wheel angular rate and a steering wheel direction.

14. (Original) A method as recited in claim 12 further comprising determining a vehicle speed and wherein applying a brake-steer comprises applying brake-steer as a function of a steering wheel angle, a steering wheel rate, a steering wheel direction and a vehicle speed.

15. (Original) A method as recited in claim 12 wherein the first boost curve comprises a non-linear-boost curve.

16. (Original) A method as recited in claim 12 wherein the first boost curve increases brake-steer at a first rate for a first period of time, increases brake-steer at a second rate for a second period of time, wherein the second rate is greater than the first rate and increases brake-steer at third rate for a third period of time wherein the third rate is less than the second rate.

17. (Original) A method as recited in claim 12 wherein the second boost curve comprises a non-linear-boost curve.

18. (Original) A method as recited in claim 12 wherein the second boost curve decreases brake-steer at a first rate for a first period of time and decreases brake-steer at a second rate for a second period of time, wherein the second rate is less than the first rate.

19. (Original) A method as recited in claim 12 wherein applying brake-steer comprises applying at least one brake at a first wheel to reduce a vehicle turning radius of the vehicle; and

simultaneously with the step of applying at least one brake, applying drive torque to a second wheel.

20. (Original) A method as recited in claim 12 wherein detecting a parking mode comprises detecting a parking mode in response to a vehicle speed.

21. (Original) A method as recited in claim 12 wherein detecting a parking mode comprises detecting a parking mode in response to a steering wheel angle.

22. (Original) A method as recited in claim 12 wherein detecting a parking mode comprises detecting a parking mode in response to a vehicle speed and a steering angle.

23. (Original) A method as recited in claim 12 wherein detecting a parking mode comprises detecting a parking mode in response to a driver-actuated switch.

24. (Original) A method as recited in claim 12 further comprising determining a surface μ , wherein applying brake-steer comprises applying brake-steer in response to the surface μ to reduce a vehicle turning radius.

25. (Original) A method as recited in claim 12 further comprising determining a vehicle load, wherein applying brake-steer comprises applying brake-steer at a first wheel in response to the vehicle load to reduce a vehicle turning radius.

26. (Original) A method as recited in claim 12 further comprising determining a throttle position, wherein applying brake-steer comprises applying brake-steer in response to the throttle position to reduce a vehicle turning radius.

27. (Original) A method as recited in claim 12 wherein applying brake-steer comprises applying at brake-steer as a function of an anti-lock brake system.

28. (Original) A method as recited in claim 12 wherein applying brake-steer comprises applying brake-steer as a function of a traction control system.

29. (Currently Amended) A method of controlling an automotive vehicle having a turning radius comprising:

detecting a parking mode;

in the parking mode, applying a first positive torque to a first driven wheel; [[and]]

simultaneously with the step of applying a first positive torque, applying a second positive torque greater than the first positive torque to a second wheel so that the turning radius of the vehicle is reduced; and

determining a brake pressure request, and discontinuing the steps of applying a first positive torque and a second positive torque when said request is greater than a predetermined threshold.

30. (Cancelled)

31. (Original) A method as recited in claim 29 wherein detecting a parking mode comprises detecting a parking mode in response to a vehicle speed.

32. (Original) A method as recited in claim 29 wherein detecting a parking mode comprises detecting a parking mode in response to a steering wheel angle.

33. (Original) A method as recited in claim 29 wherein detecting a parking mode comprises detecting a parking mode in response to a map correlating vehicle speed and a steering wheel rate to a parking/non-parking condition.

34. (Original) A method as recited in claim 29 wherein detecting a parking mode comprises activation of a switch mechanism.

35. (Original) A method as recited in claim 29 wherein applying a second positive torque comprises applying the second positive torque as a function of a traction control system.

36. (Original) A method as recited in claim 29 further comprising switching from a 4x4 mode into a 4x2 mode when applying the second positive torque.

37. (Original) A method as recited in claim 29 wherein determining a parking mode comprises determining a parking mode in response to a steering system pressure.

38-43. (Cancelled)

44. (Currently Amended) A method of controlling an automotive vehicle having a turning radius comprising:

detecting a parking mode;

detecting a transfer case mode;

applying brake-steer in response to a parking mode and a transfer case mode,
wherein applying brake-steer comprises proportioning front wheel and rear wheel brakes based on the transfer case mode.

45. (Cancelled)

46. (Original) A method as recited in claim 44 wherein detecting a parking mode comprises detecting a parking mode in response to a vehicle speed.

47. (Original) A method as recited in claim 44 wherein detecting a parking mode comprises detecting a parking mode in response to a steering wheel angle.

48. (Original) A method as recited in claim 44 wherein detecting a parking mode comprises detecting a parking mode in response to a map correlating vehicle speed and a steering wheel rate to a parking/non-parking condition.

49. (Original) A method as recited in claim 44 wherein detecting a parking mode comprises detecting a parking mode in response to a driver-actuated switch.

50. (Currently Amended) A method as recited in claim 44 wherein applying brake-steer further comprises applying an increased drive torque to a second wheel relative to a first wheel.

51. (Currently Amended) A method as recited in claim 44 wherein applying brake-steer further comprises applying brake-steer to a front wheel.

52. (Cancelled)

53. (Currently Amended) A vehicle comprising:

a traction control system;

means to determine a parking mode; and

a controller coupled to the means to determine a parking mode, said controller programmed to, in the parking mode, apply a first positive torque, as a function of said traction control system, to a first driven wheel and simultaneously with applying the first positive torque, apply a second positive torque greater than the first positive torque to a second wheel so that the turning radius of the vehicle is reduced.

54. (Cancelled)

55. (Original) A vehicle as recited in claim 53 wherein the means to determine a parking mode comprises detecting a parking mode in response to a vehicle speed.

56. (Original) A vehicle as recited in claim 53 the means to determine a parking mode comprises detecting a parking mode in response to a steering wheel angle.

57. (Original) A vehicle as recited in claim 53 wherein the means to determine a parking mode comprises detecting a parking mode in response to a vehicle speed and a steering angle.

58. (Original) A vehicle as recited in claim 53 wherein the means to determine a parking mode comprises detecting a parking mode in response to a driver-actuated switch.

59. (Original) A vehicle as recited in claim 53 further comprising a transfer case having a 4x2 mode and a 4x4 mode, said controller selecting 4x2 mode when applying a second positive torque.

60. (Original) A method as recited in claim 53 wherein the vehicle comprises an open differential or a limited slip differential.

61. (Original) A vehicle as recited in claim 53 wherein the means to determine a parking mode comprises a steering system pressure sensor.